

“Bioremediation” of Oil Fields in Pennsylvania

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Outline

I. Natural Attenuation: The Passive Remedial Approach

- aerobic biodegradation
- anaerobic biodegradation
- dispersion
- volatilization
- adsorption

II. Natural Attenuation: The Aggressive Removal Approach

- solidification
- aerobic biodegradation
- volatilization
- organic load
- composting

III. Voodoo Versus Science

Background

- NW PA Major Oil Spill Project (1985-1987)

- Bar Room Brawls and Back Alley Debates

Practical Application of “Bioremediation” at Removal Response Actions

- PIC #1-6-0006, McKean County, PA

- The Bryner Experiments, McKean County, PA

- Mayburg Mountain, Forest County, PA

- North Fork Minor Oil Spill, Allegheny National Forest

- Park & Hungiville OPA Site, McKean County, PA

- Allegro Oil & Gas Inc OPA Site, Potter County, PA

- Melvin Farm OPA Site, McKean County, PA

- Avery Farm OPA Site, McKean County, PA

- Hess Farm OPA Site, McKean County, PA

- Onofrio Estate OPA Site, McKean County, PA

Also Worthy of Mention

- Czech Embassy Spill, Washington, DC

- High Rise Condo Spill, Washington, DC

IV. Future Removal Response Bioremedial Plan of Action

- Site-Specific “Bio-Pod” Characterization

- Identification of Hydrocarbon-Degrading Microbes

- Removal Response Application of Plant System Technologies???